

UDC 595.768.23(477)

NEW RECORDS OF MESITES (COLEOPTERA, CURCULIONIDAE) IN UKRAINE

V. Yu. Nazarenko¹, A. V. Gontarenko²

¹Schmalhausen Institute of Zoology, NAS of Ukraine
vul. B. Khmelnytskogo, 15, Kyiv, 01030 Ukraine

E-mail: nazarenko@izan.kiev.ua

²Odesa, Ukraine

E-mail: stierlyz@rambler.ru

New Records of Mesites (Coleoptera, Curculionidae) in Ukraine. Nazarenko, V. Yu., Gontarenko, A. V.—New records of two species of *Mesites* Schoenherr are provided, of them *M. cunipes* Boheman, 1838 is recorded for the first time from Ukraine. The key to differentiate these species from other members of the subfamily is provided.

Key words: Coleoptera, Curculionidae, Cossoninae, *Mesites*, beetles, weevils, Ukraine, Odesa Region, fauna, wood, xylophagy.

Introduction

The genus *Mesites* Schoenherr, 1838 includes about 13 species worldwide (Parfentiev, 1960): in Palaearctic Region and Europe — 9 and 4 species respectively (Hlaváč, Maughan, 2013), 2 in North America (Anderson, 2002); the rest distributed in Central Africa (Congo), South Asia (Sri Lanka) and introduced to New Zealand (May, 1994; Alonso-Zarazaga, Lyal 1999). Adults and larvae are feeding in decaying wood of deciduous and coniferous trees including driftwood on sea beaches. In the nearest European countries (Romania and southern Russia) the genus is represented by 2 species — *M. cunipes* Boheman, 1838 and *M. pallidipennis* Boheman, 1838. Only *M. pallidipennis* was previously known from Ukraine: Crimea (Sevastopol) (Boheman, 1838; Lukianovich, Arnoldi, 1951; Parfentiev, 1960; Folwaczny, 1973), Danubian delta (Blinstein, 1974) and Odesa with environs (Boheman, 1838; Blinstein, 1989).

Material and methods

Field samplings were conducted mainly manually. The nomenclature and synonymy follow the recent Catalogue (Hlaváč, Maughan, 2013). Morphological terminology generally follows Güttekin, Lyal (2014). The photographs were captured using Leica M165C microscope equipped with Leica DFC450C digital camera and Leica Suite software, and edited with GIMP v. 2.8. 4 and Inkscape v. 0.48.4 r9939. Mapping was done using modified free vector map from d-maps. com.

Specimens were identified by the first author. Examined and listed here specimens are deposited in I. I. Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine, Kyiv (SIZK) and in the private collection of A. V. Gontarenko (cGon).

Results

The species *M. cunipes* Boheman, 1838 as first record for Ukraine and *M. pallidipennis* Boheman, 1838 were found in the Odesa Region. Morphological differences of listed species and the key to identification of *M. pallidipennis* and *M. cunipes* follow.

Subfamily Cossoninae

Genus *Mesites* Schoenherr, 1838

Key to species of *Mesites* occurring in Ukraine

1. Rostrum with parallel or gradually convergent (divergent) sides in both sexes. Body nearly cylindrical. [other Cossoninae species]
- Rostrum at least in female abruptly widened and (or) narrowed. Body distinctly flattened. 2
2. Rostrum sharply widened in apical portion. Genus *Cossonus*
- Rostrum in males parallelsided with slightly dilated antennal insertion submedian, in females widened in short distance near the base, then sharply narrowed. Genus *Mesites*. 3
3. Body nearly unicolor, dark (fig. 1, *a–b*). Pronotal disc with distinct microreticulation between punctures (fig. 1, *e*). Elytral interspaces measured in basal $\frac{1}{2}$ near suture ca. 1.2–1.9 times narrower than striae (fig. 1, *h*). Interstrial punctures weakly enlarged on declivity, distance between punctures usually larger than puncture diameter (fig. 1, *g*). Median lobe of aedeagus slightly widened from the base to its middle, apical portion almost parallelsided, apical edge gently rounded (fig. 1, *m*). Female sternite VIII with arms wide divergent from apodeme and inner subparallel (fig. 1, *k*). *M. cunipes*
- Body nearly bicolor, dark with pale brown, yellowish or reddish elytra (fig. 1, *c–d*). Pronotal disc smooth with indistinct microreticulation between punctures (fig. 1, *f*). Elytral interspaces measured in basal $\frac{1}{2}$ near suture ca. 1–1.9 times wider than striae (fig. 1, *i*). Interstrial punctures markedly enlarged on declivity, more dense, in part contiguous (fig. 1, *j*). Median lobe of aedeagus almost parallelsided with apex rounded semicircular (fig. 1, *n*). Female sternite VIII with arms narrowly divergent from apodeme and inner distinctly arcuate (fig. 1, *l*). *M. pallidipennis*

Mesites (s. str.) *cunipes* Boheman, 1838 (fig. 1, *a–b*, *e*, *g*, *h*, *k*, *m*)

Boheman, 1838: 1046; Folwaczny, 1973: 130.

Material. Odesa Reg.: floodlands of Dniester Riv., 2.05.1985, 1 ♂ (Berezovskii) (SIZK); Biliaivka Distr., 9 km W Maiaky, right bank Dniester Riv., floodplain forest, under bark, 22.07.1995, 1 ♂; 12.07.1996, 5 ♂, 3 ♀; under snag, 22.08.2000, 2 ♀ (A. Gontarenko); Bolgrad Distr., left bank of Yalpug lake, near Krynychne, 18.07.2000, 1 ♂ (Tkachenko) (cGon); idem, between Krynychne and Izmail, in wood of *Salix* sp., 24.07.2000, 1 ♀ (Trach) (SIZK).

Distribution. Europe: Azerbaijan, Bulgaria, Croatia, France, Greece, Italy, Romania, Spain, S European Russia, Switzerland; North Africa: Algeria, Egypt; Asia: Cyprus, Iran, Turkmenistan, Turkey (Hlaváč, Maughan, 2013). First record from Ukraine (fig. 2, circles).

Biology. Develops in old wood of dead but staying willows and poplars (Lukjanovich, Arnoldi, 1951; Folwaczny, 1973).

Diagnosis. This species can be recognized from externally similar *Cossonus* species (*C. (Caenocossonus) cylindricus* Sahlberg, 1835) with rostrum not widened in ♂ and dilated basally in ♀. From wider distributed *M. pallidipennis* it differs by nearly unicolor body, evident microsculpture on pronotum, elytral interstriae narrower than striae, sparse interstrial punctures weakly enlarged on declivity; slightly widened from the base to its middle median lobe of aedeagus with apical portion almost parallelsided and apical edge wide rounded; wide divergent at the base and inner subparallel arms of sternite VIII in female; feeding in dead wood, not driftwood.

Mesites (s. str.) *pallidipennis* Boheman, 1838 (fig. 1, *c–d*, *f*, *i–j*, *l*, *n*)

Boheman, 1838: 1045; Folwaczny, 1973: 129.

Material. Odesa Reg.: Kylia Distr., Vylkove env., E part of Kubanu isl., on *Salix*, 13.07.1997, 1 ♂; idem, middle part, floodland forest with *Eleagnus* and *Hippophae*, 17.07.1997, 1 ♂ (Ermolenko); Illichivsk env., Sanzhiuka, sea coast, 1.02.2001, 1 ♂ (Trach) (SIZK); Tatarbunary Distr., recreation center Raseika, sea coast, 27.06.2003, 1 spec. (N. Gontarenko), 28.06.2003, 1 spec., 3.07.2009, 1 spec. (A. Gontarenko) (cGon); Kylia Distr., Vylkove env., Kubanu isl., SE coast, adults under bark, larvae in rotten wood of ?*Populus* sp., in the sea and on coast to ~20–50 m from water, 28.08.2010, 2 ♂, 1 ♀; idem, 30.08.2010, 9 ♂, 7 ♀, 20 larvae (Nazarenko) (SIZK).



Fig. 1. Morphological details of adult *Mesites*: a — *M. cunipes*, ♂; b — *M. cunipes*, ♀; c — *M. pallidipennis*, ♂; d — *M. pallidipennis*, ♀; e — pronotal disc microreticulation of *M. cunipes*; f — the same of *M. pallidipennis*; g — left elytron apex of *M. cunipes*; h — medial part of elytral disk of *M. cunipes*; i — the same of *M. pallidipennis*; j — left elytron apex of *M. pallidipennis*; k — female sternite VIII of *M. cunipes*; l — the same of *M. pallidipennis*; m — aedeagus median lobe of *M. cunipes*; n — the same of *M. pallidipennis*.



Fig. 2. Findings of *Mesites cunipes* (circles) and *M. pallidipennis* (triangles: gray for examined material and white for cited) in Ukraine. Black dots — exact position.

Distribution. Europe: Azerbaijan, Bulgaria, Croatia, France, Greece, Italy, Romania, Spain, S European Russia, Ukraine; North Africa: Algeria, Egypt, Tunisia; Asia: Cyprus, Lebanon, introduced in Turkey (Hlaváč, Maughan, 2013). Most western record from Ukraine. Confirmed record from Odesa (fig. 2, triangles).

Biology. Develops in old driftwood of willows and poplars, coniferous trees (Lukjanovich, Arnoldi, 1951; Folwaczny, 1973).

Diagnosis. This species can be recognized from superficially similar *Cossonus* (s. str.) *linearis* (Fabricius, 1775) and *C. (Caenocossonus) parallelepipedus* (Herbst, 1795) as foregoing species. From *M. cunipes* it differs by usually bicolor dark body with pale elytra, shining pronotum with indistinct microreticulation, elytral interspaces so wide or wider than striae with dense markedly enlarged on declivity interstrial punctures; aedeagus median lobe almost parallel-sided with semicircular apex; narrowly divergent from the base and inner distinctly arcuate arms of sternite VIII in female; feeding in driftwood.

Discussion

As follows from the results given above, *M. cunipes* is usually found at a greater distance from the coast than *M. pallidipennis* due to differences in their trophic features.

The occurrence of both species in the Odesa Region was expected since they are known from adjacent territories. New records of both species along sea coast, in particular in Eastern Ukraine are possible.

References

Alonso-Zarazaga, M. A., Lyal, C. H. C. 1999. *A World Catalogue of families and genera of Curculionoidea (Insecta: Coleoptera) (Excepting Scolytidae and Platypodidae)*. Entomopraxis S. C. P., Barcelona, 1–116.

Anderson, R. S. 2002. IX. Cossoninae Schoenherr 1825, In: Arnett, R. H., Thomas, M. C., Skelley, P. E., Frank, J. H., eds. *American beetles. Vol. 2. Polyphaga; Scarabaeoidea through Curculionoidea*. CRC Press, Boca Raton, London, New York, Washington, D. C., 756–759.

Blinstein, S. Ya. 1974. Zhestkokrylye (Coleoptera) severo-zapadnogo poberezhia Chernogo moria. In: *Materialy VII siezda Vsesoiuznogo entomologicheskogo obshchestva, chast 1*. Leningrad, 11 [In Russian].

Blinstein, S. Ya. 1989. K izucheniiu zhestkokrylykh yuga Ukrayiny. In: *Ekologiya i taksonomiia nasekomykh Ukrayiny: Sbornik nauchnykh trudov, vypusk 3*. Odesa, 63 [In Russian].

Bohemian, C. H. 1838. [new taxa]. In: Schoenherr, C. J. *Genera et species Curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman, et entomoilogis aliis illustratae. Tomus quartus. Pars secunda*. Roret, Flescher, Parisiis, Lipsiae, 601–1121 [1122–1124 (Corrigenda)].

Folwaczny, B. 1973. Bestimmungstabelle der paläarktischen Cossoninae (Coleoptera, Curculionidae) — ohne die nur in China und Japan vorkommenden Gattungen, nebst Angaben zur Verbreitung. *Entomologische Blätter*, **69** (2), 65–180.

Gültekin, L., Lyal, C. H. C. 2014. A taxonomic review on the genus *Larinodontes* Faust, 1898 (Coleoptera: Curculionidae) from the Oriental Region with a description of a new species from India. *Journal of Insect Biodiversity*, **2** (17), 1–13.

Hlaváč, P., Maughan, N. 2013. Subfamily Cossoninae. In: Löbl, I., Smetana, A., eds. *Catalogue of Palaearctic Coleoptera. Vol. 8*. Brill, Leiden, 219.

Lukianovich, F. K., Arnoldi, L. V. 1951. Opredelitel dolgonosikov-trukhliakov podsemeistva Cossoninae fauny SSSR i sopredelnykh stran Evropy i Perednei Azii. *Entomologicheskoe obozrenie*, **31** (3–4), 349–365 [In Russian].

May, B. M. 1994. An Introduction to the Immature Stages of Australian Curculionoidea. In: Zimmerman, E. C., ed. *Australian weevils (Coleoptera: Ceevils (Coleoptera, Curculionidae) as pests of wooden dwelling houses and technical constructions. Enurculinoidea. Vol. 2*. CSIRO, East Melbourne, 365–728.

Parfentiev, V. J. 1960. Weevils (Coleoptera, Curculionidae) as pests of wooden dwelling houses and technical constructions. *Entomologicheskoe Obozrenie*, **39**(3), 545–550 [In Russian].

Received 11 November 2016

Accepted 28 March 2017